

### Remarks

(In the remarks below, several assumptions have been made regarding which claims are rejected in the Office action, due to some inconsistencies in the Office action itself. For example, while the Summary indicates that claims 1-8 and 12-24 are rejected, the first paragraph of the detailed action states that “[c]laims 1-8, 11-14, 16-24 are presented for the examination. Claims 9-11, 15 are canceled.” (Page 2 of the Office action.) Also, only claims 1-8, 12-14 and 18 are referred to within the body of the detailed action. Further, a supplemental amendment filed directly with the Examiner by fax on May 6, 2006, as a result of a telephonic interview with the Examiner has apparently not been entered, possibly because the amendment resulted from a miscommunication during the interview regarding which claims were allowable.)

Claims 1-8, 12-14 and 16-24 remain pending. Claims 9-11 and 15 were canceled previously. As claims 16, 17 and 19-24 do not appear to be specifically mentioned in the Office action, this response presumes these claims to be allowable. Thus, the patentability of claims 16, 17 and 19-24 is not commented upon herein. The Assignee respectfully traverses the rejections and requests allowance of claims 1-8, 12-14 and 16-24.

### Claim Rejections Under 35 U.S.C. § 103

Claim 1 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,353,819 to Edwards et al. (hereinafter “Edwards”) in view of U.S. Patent No. 5,181,171 to McCormack et al. (hereinafter “McCormack”). (Page 2 of the Office action.) Claims 2-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Edwards in view of U.S. Patent No. 5,793,368 to Beer (hereinafter “Beer”). (Page 3 of the Office action.) Claims 12 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Edwards in view of “CA Ships Database-Management Suite For E-Commerce” by Whiting. (Page 6 of the Office action.) Claims 14 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Edwards in view of Beer, U.S. Patent No. 5,933,837 to Kung (hereinafter “Kung”) and “System and Method for Capturing Browser Session and User Actions” by Hayner et al. (Page 7 of the Office action.) The Assignee respectfully traverses the rejections in light of the following discussion.

#### *Claim 1*

Claim 1 provides for a *plurality* of transparent architecture layers between the first and

second architecture layers which enable the first and second layers to communicate directly without having to communicate via the plurality of transparent layers.

In reference to claim 1, the Office action indicates that “Edwards does not explicitly teach a plurality of transparent architecture layers. However, McCormack teaches the plurality of transparent architecture layer[s] (The layer of nodes 44 ... is referred to as a middle, or hidden, layer, col 7, ln 3-10/ links with skip hidden layer in the network, col 25, ln 46-48/ reduction of the number of links in the network 50 which is enabled by providing links 48 which skip the hidden layer of nodes, col 8, ln 64-68).” (Page 3 of the Office action.) The Assignee respectfully disagrees, as McCormack appears to not specifically discuss “the plurality of transparent architecture layers enabling the first architecture layer and the second architecture layer to communicate directly *without having to communicate via the plurality of transparent architecture layers*,” as provided for in claim 1.

In general, McCormack describes “[a]n adaptive, or neural, network ... which is particularly adapted for performing first break analysis for seismic shot records.” (Abstract.) Such analysis is useful in “prospecting for underground oil and gas reservoirs.” (Column 1, lines 12 and 13.) Fig. 3 shows an example of a back-propagation neural network 40 having an input layer 42 of nodes, an output layer of nodes 46, and a single middle or hidden layer of nodes 44. (Column 7, lines 3-11.) McCormack further indicates that multiple hidden layers may reside between the input layer 42 and the output layer 46. (Column 7, lines 11-14.) Fig. 4 is a diagram of a similar neural network 50 which includes links 48 which directly link input nodes 42 with output nodes 46, thus partially bypassing the single hidden layer 44. According to McCormack, these direct links provide a higher degree of connectivity, and thus “allow[] more rapid convergence toward the proper weighting” of input factors for each node to produce a proper output during training of the network 50. (Column 8, lines 43-60.) These direct links may “also optimize performance of network 50 for its application.” (Column 8, line 61, to column 9, line 2.)

However, while McCormack mentions the possibility of more than one hidden layer, McCormack does not appear to discuss *not having to communicate via more than one* hidden layer, as provided for in claim 1. For example, McCormack shows in Fig. 4 the bypassing of the hidden layer 44 by way of links 48. However, McCormack does not specifically illustrate *bypassing two* hidden layers between the input layer 42 and the output layer 46, even though

more than one hidden layer may be present. Also, McCormack refers to a “hidden layer” as a layer that is not an input or output layer. (See column 7, lines 8-14.) Therefore, just because a layer is hidden is not indicative of whether communication with that layer and surrounding layers takes place, as shown explicitly in Figs. 3 and 4. Further, in viewing Fig. 4, each of the input nodes 42 which communicates directly with an output node 46 *also communicates with one of the hidden nodes 44*. Thus, the Assignee asserts that the combination of Edwards and McCormack does not teach or suggest two architecture layers communicating directly without having to communicate by way of more than one transparent layer, as provided for in claim 1, and such indication is respectfully requested.

The Office action also states that “[i]t would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine the teaching of Edwards and McCormack because McCormack’s component would improve the efficiency of Edward’s systems by allowing more rapid convergence during training of the network to optimize the performance of network.” (Page 3 of the Office action.)

The Assignee respectfully disagrees with this assertion, as no motivation exists to combine Edwards and McCormack. Moreover, the teachings of Edwards and McCormack are uncombinable. Edwards teaches a multi-layered relational database manager whose data access performance is enhanced during row-retrieval operations. (Column 2, lines 48-50.) This enhancement is accomplished by way of a RAM Codegen Executor Component Layer 204 executing a subroutine “A+” therein that is capable in some cases of performing row-retrieval operations, thus allowing subsequent control to pass directly to an Input/Output Component Layer 208, thereby bypassing a Record File Manager Component Layer 206. (See Figs. 2 and 3a-3c; column 2, line 44, to column 3, line 17; column 5, lines 64-67; and column 6, line 53, to column 7, line 25.)

Thus, the system of Edwards differs from that of McCormack in significant ways, precluding a combination of the two references. First, Edwards specifically refers to a *relational database manager*, while McCormack exclusively discusses a *neural network* employed in analysis of seismic data. Such diverse systems cannot be combined on any level due to how differently the two systems operate, the data and communications involved, and the like. More specifically, all nodes of a neural network work in a similar manner by weighting a number of input values and combining them to form an output response. (Column 7, lines 33-45.) On the

other hand, Edwards employs several distinct layers of software, each handling different types of data formats and executing diverse functions to perform the overall task of accessing a database, as described above.

Secondly, whether a hidden layer of the McCormack system is skipped is determined at *training time* before actual employment of the system to perform seismic first break analysis. (Column 8, lines 43-60.) Oppositely, whether an architectural layer of Edwards is bypassed is determined during *execution* according to the specific type of database access involved. (Column 7, lines 15-25.) No “training” of the Edwards system prior to actual execution is involved.

Therefore, given these stark differences between the systems of Edwards and McCormack, combining the teachings of McCormack with Edwards is not possible. Further, even if such a combination were plausible, McCormack’s system would not “improve the efficiency of Edwards’ systems by allowing more rapid convergence during training of the network to optimize the performance of the network,” as alleged in the Office action, as the system of Edwards does not require or benefit from training, as such training is only associated with neural networks.

Thus, in light of the above discussion, the Assignee contends that claim 1 is allowable in view of the combination of Edwards and McCormack, and such indication is respectfully requested.

#### *Claims 2-8 and 11-13*

Claim 2 incorporates a user interface attachable to the first layer object, “wherein the user interface which comprises a selected user interface *type* dynamically selectable and dynamically interchangeable from a plurality of user interface types....” (Emphasis supplied.) Further, claim 2 indicates that the selected user interface type “comprises at least one member of a group consisting of a graphical user interface, a web enabled interface, a handheld device interface, a voice simulation interface, a voice response interface, a voice activated interface, a voice recognition interface, and an audio interface.”

The Office action alleges that Beer teaches such a user interface, specifically by way of dynamically switching between visual styles, as described at column 2, lines 10-15, and by way of multiple selectable visual styles, as presented at column 2, lines 43-46. (Page 4 of the Office

action.)

The Assignee respectfully disagrees with the allegation. Beer only discloses switching between *visual styles* of a *single* programmable graphical user interface (GUI). (Column 2, lines 9-25.) For example, Beer specifically discusses use of Windows 95 and Motif *styles* for the GUI, which differ in terms of window appearance, toolbar buttons, radio buttons, and the like. (See Figs. 1-4; column 4, lines 10-18; and column 11, lines 10-23.) However, Beer only discusses the GUI, which is a single interface *type*, unlike the plurality of interface types of claim 2. Other possible interface types provided in the present application, as are enumerated in claim 2, include a web enabled interface, a handheld device interface, voice-related interfaces, and the like.

Beer also states that “[t]he following examples show that the state, the *user interface type*, and the *current visual style setting* determine how a user interface control is displayed.” (Column 11, lines 6-9; emphasis supplied.) Thus, user interface types, and current visual styles, as the terms are used in Beer, represent two different constructs. According to the language employed throughout Beer, current visual style, and *not* user interface type, refers to Windows 95 and Motif. The user interface type is instead the type of interface *feature* involved, such as a radio button (see column 11, line 29) or a title bar (see column 10, line 47), both of which are identified by the variable name “uiType” and denote specific visual structures within a graphical user interface. Thus, the Assignee contends that Beer does not teach or suggest a selected user interface type dynamically selectable and dynamically interchangeable from a plurality of user interface types, as provided for in claim 2, and such indication is respectfully requested.

The Office action indicates that “[i]t would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine the teaching of Edwards and Beer because Beer’s [dynamic switching] between visual styles would improve the efficiency of Edwards’s system by reducing security risks when loading applications from servers.” (Page 4 of the Office action.) However, Edwards does not appear to entertain the possibility of loading an application from a server, and moreover does not appear to even mention the word “server.” Edwards also does not appear to discuss user interfaces, much less different types of interfaces. Thus, Edwards would not benefit from any security enhancements regarding downloading of interfaces from a server, as provided by Beer. Thus, the Assignee contends no motivation exists to combine Edwards and Beer.

Claims 3-8, 12 and 13 depend from independent claim 2, thus incorporating the various provisions of that claim. Thus, the Assignee asserts that claims 3-8, 12 and 13 are allowable for at least the reasons provided above in support of claim 2, and such indication is respectfully requested.

#### *Claims 14-18*

Claim 14 indicates that a witness province is configured “to dynamically support a plurality of user interfaces, each having a different *interface type*....” (Emphasis supplied.) Claim 14 also sets forth a list of the possible different interface types, including a graphical user interface.

The Office action asserts that Beer teaches support of a plurality of user interfaces, each having a different interface type, by way of its visual styles. (Page 8 of the Office action.) However, as discussed above, the different visual styles are all associated with a GUI, which is a single interface type. Thus, Beer does not teach or disclose support of multiple interface types, as provided for in current claim 14. Therefore, the Assignee contends that claim 14 is allowable in view of any combination of Edwards, Kung and Beer, and such indication is respectfully requested.

Also, the Office action states that “[i]t would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine the teaching of Edwards, Kung and Beer because Beer’s [dynamic switching] between visual styles would improve the efficiency of Edwards and Kung’s systems by reducing security risks when loading applications from servers.” (Page 8 of the Office action.) The Assignee respectfully disagrees. As discussed above, no motivation exists to combine Beer with Edwards. In addition, Kung does not appear to discuss the possibility of downloading an application from a server. As a result, Kung would not benefit from any security enhancements provided by Beer for such a task. As a result, the Assignee contends no motivation exists to combine Kung and Beer.

Claims 16-18 depend from independent claim 14, thus incorporating the limitations of that claim. Therefore, the Assignee asserts that claims 16-18 are allowable for at least the reasons set forth above in support of claim 14, and such indication is respectfully requested.

### Presumed Allowable Claims

As mentioned above, the Office action does not appear to specifically address claims 16, 17 and 19-24. Accordingly, these claimed are presumed allowable and are not discussed further herein.


### Conclusion

Based on the above remarks, the Assignee submits that claims 1-8, 12-14 and 16-24 are allowable. Additional reasons in support of patentability exist, but such reasons are omitted in the interests of clarity and brevity. The Assignee thus respectfully requests allowance of claims 1-8, 12-14 and 16-24.

The Assignee believes no additional fees are due with respect to this filing. However, should the Office determine additional fees are necessary, the Office is hereby authorized to charge Deposit Account No. 21-0765.

Respectfully submitted,

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